

Atlantic Richfield Company

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September 8, 2011

CERTIFIED – RETURN RECEIPT REQUESTED

Ms. Jere Johnson
Remedial Project Manager
U.S. Environmental Protection Agency Region 9
75 Hawthorne Street, SFD-9-1
San Francisco, CA 94105

Subject: August 2011 Monthly Report, Yerington Mine Site, Lyon County, Nevada: Administrative Order for Remedial Investigation and Feasibility Study (RI/FS), CERCLA Docket No. 9-2007-0005; Administrative Order on Consent, CERCLA Docket No. 09-2009-0010

Dear Ms. Johnson:

Pursuant to the above referenced orders issued by the U.S. Environmental Protection Agency - Region 9 (EPA), Atlantic Richfield Company (ARC) has prepared this August 2011 monthly report for RI/FS and removal action activities at the Yerington Mine Site (Site).

August 2011 Activities

Site Security and O&M Activities

- Continued routine Site O&M, security and bird deterrent activities. Security cameras at various locations (Main and Arimetco gates, entrances to buildings) indicated no activity of concern. Continued replacing "Danger - Keep Out" signs on perimeter fencing that have been damaged.
- The BirdGard® towers were shut down August 29 in response to dry conditions in the evaporation ponds and to reduce potential habituation to devices by birds, and will be re-activated when water is observed in the ponds or when rain is forecast over a weekend. The two "Wind Dancers" remained active, and new "Wind Dancers" have been ordered to replace torn and damaged tubes. New bird deterrent flags were installed at six of the 12 blocks designed to securely hold the flags at locations around the evaporation ponds (the six flags will be rotated approximately every two weeks, or as field observations dictate, to lessen the possibility of birds becoming habituated to the flags).
- Water was absent from the Pumpback Well System (PWS) Evaporation Pond cells: North Cell = 0.0 feet; Middle Cell = 0.00 feet; South Cell 0.00 feet. Repairs were made to electrical wiring in the pumpback well pumps in preparation of 3Q 2011 groundwater sampling.
- Arimetco Heap Leach Pad (HLP) Fluid Management System (FMS) pond levels: Phase 1 Pond = 2.8 feet; FMS Pond = 7.0 feet; VLT Pond = 3.4 feet; Slot 2 Pond = 13.4 feet. Approximately 185,373 gallons of solution were transferred from the VLT Sediment Pond (VLTSP) to the FMS Evaporation Pond. No solutions were transferred from the Slot Sediment Pond (SSP) or the Phase 1 Pond to the FMS Evaporation Pond. A total of approximately 35,089 gallons of solution were pumped from the FMS leak detectors (approximately 319,576 gallons of solution have been pumped from the leak detectors since January 1, 2011). Weir flows from the Phase IV Slot and VLT HLPs averaged 6.2 and 3.8 gpm, respectively (see attached monitoring data).
- Repairs were made to the VLT Pond liner and to the PWS Evaporation Pond south cell liner on August 29.

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August 2011 Activities - Continued

Site Security and O&M Activities - Continued

- Completed the calibration of instrumentation installed inside the 14-inch diameter HDPE pipe from the Arimetco Phase III Mega Sumps to the Arimetco FMS Pond to measure drain-down from the Phase III HLPs.
- Initiated the preparation of a Technical Memorandum that describes the water balance for the Arimetco HLPs and short-term alternatives for the Arimetco FMS to manage drain-down fluids.
- Received the *Public Review Draft Feasibility Study (FS) for Arimetco Facilities Operable Unit 8 Heap Leach Pads and Drain-Down Fluids* dated July 2011, and initiated a review of the draft FS.

Other Site Activities

- Singatse Peak Services (SPS) personnel worked in their core storage area, initiated modifications to the former truck shop and electric shop for future needs, and continued drilling activities in the area of the open pit.
- B.V. Nevada continued demolition and salvage activities.
- Tri State Surveying established 77 of 88 aerial control points required for aerial photography and mapping for the Site and surrounding area.
- Continued Site wildlife surveys and wildlife observation reports.
- USFWS personnel visited the Site to collect a deceased bird from the Arimetco FMS VLT Pond.

Site Characterization Activities

- Site-wide monthly groundwater elevation measurements were obtained August 30 - September 1, including Arimetco (OU-8) monitor wells.
- A pit lake water elevation of 4225.70 feet amsl was recorded on August 31 from the pressure transducer, an increase of 0.32 feet since July 27, 2011. The pit lake elevation has risen 4.473 feet since August 31st of 2010.
- FMS Ponds were sampled August 22 and August 29.
- Continued meteorological monitoring at the AM-6 location including wind speed/direction, temperature, relative humidity, barometric pressure, precipitation and solar radiation.
- One residence (DW-184) was added to the domestic well sampling program in August. A signed access agreement from the owner of DW-77 is pending.
- No changes to the Bottled Water Program occurred during August.
- Submitted the 2Q 2011 Domestic Well Monitoring Report on August 15.
- Submitted the 2Q 2011 Groundwater Monitoring Report on August 26.
- Conducted the 3Q 2011 groundwater monitoring event August 7-18. Five OU-8 monitor wells were sampled August 23-25 and August 30 (these wells exhibited very low yields).
- Prepared for the 3Q 2011 domestic well monitoring event.
- Submitted responses to EPA comments on the Draft On-Site Monitor Well Installation Work Plan (Work Plan), and the revised Work Plan (Revision 1), to EPA on August 29.
- Continued field and laboratory investigations associated with the On-Site Monitor Well Installation Work Plan with four drill rigs on Site. Six monitor wells (B/W-70B, B/W-71B, PA-MW-1B, PA-MW-5B, PLMW-2S and PLMW-2B) were constructed, and zonal samples were collected from the boreholes at B/W-70, B/W-71, PA-MW-2 and PA-MW-5 (see the attached progress summary). An access gate for the drill rigs was installed on the west side of the open pit.
- Submitted the Data Summary Report for the 2010 Well Installation and Ag Field Characterization investigations on August 12. Attended a groundwater technical meeting on August 16-17 with EPA and other stakeholders to discuss the DSR and plan follow-up groundwater investigations.
- Continued the compilation of data, including an evaluation of available hydrologic tracers, for the Background Groundwater Quality Assessment. Continued the evaluation of statistical methods to assess background concentrations in groundwater.

August 2011 Activities - Continued

Site Characterization Activities - Continued

- Received EPA comments on August 19 on the Draft Aquifer Test Work Plan dated July 8, 2011. Initiated responses to comments and revisions to the Draft Work Plan. Initiated planning logistics for the aquifer test.
- Continued preparations for the laboratory phase of the aquifer solids testing program including an evaluation of methods to separate <200 mesh materials and communications with EPA regarding aquifer solids test methods.
- Initiated the preparation of responses to Yerington Paiute Tribe (YPT) comments dated August 4 on the Conceptual Site Model - Revision 4.
- Received, and initiated a review of, the *Draft Feasibility Study for Arimetco Facilities Operable Unit 8 Heap Leach Pads and Drain-Down Fluids*.
- Continued routine database management activities.

AOC Removal Actions

- Additional geotechnical testing of the Evaporation Pond sediments was implemented to develop the requirements for polymer application on the Ponds, as part of the revised Dust Suppression Plan. Initiated the development of an amendment to the revised Dust Suppression Plan to address application methods, health and safety requirements and decontamination procedures.
- Continued the compilation of data for inclusion in the Sub-Area A Sub-Surface Investigation Data Summary Report, performed as part of the Sub-Area A interim cover removal action.

Planned September/October 2011 Activities

Site Security and O&M Activities

- Continue routine Site O&M, security and bird deterrent activities.
- Install the new bird deterrent flags and replace the Phase 1 Pond pump.
- Submit a Technical Memorandum to EPA and the Nevada Division of Environmental Protection (NDEP) that describes the Arimetco FMS water balance and potential short-term improvements to the FMS. Continue to discuss with EPA, NDEP and SPS such improvements and other aspects of FMS monitoring.

Other Site Activities

- Tri State will set the remaining 11 control panels for Site aerial photography and mapping, and the area will be flown in early September. Tri State should complete Digital Aero Triangulation by late September, and commence map compilation in early October.
- Continue to review the *Public Review Draft Feasibility Study (FS) for Arimetco Facilities Operable Unit 8 Heap Leach Pads and Drain-Down Fluids* dated July 2011, and initiate the preparation of comments to the draft FS.
- Attend the SPS Open House on September 8 and the EPA public meeting on September 15.
- Continue Site wildlife surveys, maintenance of wildlife observation data and preparation of wildlife observation reports.

Site Characterization Activities

- Continue groundwater elevation, pit lake level monitoring and meteorological monitoring.
- Continue the Bottled Water Program.
- Conduct the 3Q 2011 domestic well monitoring event starting September 12. Initiate compilation of 3Q monitoring data for inclusion in the quarterly groundwater monitoring and domestic well monitoring reports.

Planned September/October 2011 Activities - Continued

Site Characterization Activities - Continued

- Submit responses to EPA comments, and the revised Aquifer Test Work Plan (Revision 1). Continue planning for the aquifer test including the down-hole video survey of the agricultural supply well (WDW-019) and procuring a pump contractor.
- Continue the 2011 On-Site Monitor Well installation program. Submit an addendum to the revised On-Site Monitor Well Work Plan to address three additional locations south and west of the Site.
- Complete the evaluation and compilation of available hydrogeologic and groundwater chemical data in Mason Valley, and hydrologic tracer data, and submit the Draft Background Groundwater Quality Assessment report.
- Continue the aquifer solids testing program.
- Pending EPA approval of the Phase 2 scope of work, initiate this next phase of geophysical surveys and related sub-surface utility investigations in the Process Areas. When available, review EPA's draft Process Areas (OU-3) RI Work Plan.
- When available, review EPA's draft data quality objectives for the Wabuska Drain (OU-7) RI Work Plan.
- Continue to prepare responses to comments to YPT comments on the Conceptual Site Model (CSM) and, as requested by EPA, continue to discuss the current version of the CSM.

AOC Removal Actions

- Following EPA approval of proposed polymer application methods, re-start dust suppression activities on the Evaporation Ponds (LEP and UEP) on September 12.
- Continue to compile characterization data for inclusion in the Sub-Area A Sub-Surface Investigation Data Summary Report, continue vadose zone modeling and submit the DSR.

If you have any questions or comments about the August 2011 monthly report, please contact me at (714) 228-6774 or via e-mail at jack.oman@bp.com.

Sincerely,



Jack Oman
Project Manager

Attachments

cc: Dave Seter, EPA – via electronic mail
Roberta Blank, EPA – via electronic mail
Andrew Helmlinger, EPA – via electronic mail
Tom Dunkelman, EPA – via electronic mail
Greg Lovato, NDEP – via electronic mail
Tom Olsen, BLM – via electronic mail
Dan Newell, City of Yerington – via electronic mail
Phyllis Hunewill – via electronic mail
Virgil Arellano, Lyon County Commissioner – via electronic mail
Richard Faber, Lyon County Facilities Engineering – via electronic mail
Tom Grady, Nevada State Assembly – via electronic mail
Justin Whitesides, YPT – via electronic mail

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